treatment and survival. **RESULTS:** A total of 2484 patients in the linked database met the study criteria. Mean age was 56.9 (SD=14.4) and 63.7% were male. The mean Deyo Charlson Comorbidity Index score was 0.59 (SD=1.11) over the six month pre-index period (modified to exclude malignancy). Overall, median survival time was 976 days (95% confidence interval: 847, 1194). A greater proportion of women (75%) than men (67%) were alive 365 days after their index surgery. Survival time decreased steadily with age as 98% of patients age 19-34 survived for at least 365 days after surgery compared to 95% for patients 35-44, 84% for patients 45-54, 70% for patients 55-64 and 43% for patients over 65. Most patients (52.1%) received external beam radiation, while 42.2% received temozolomide, 5.4% received a carmustine wafer implant, 2.0% received chemotherapy (including bevacizumab) and 1.3% received stereotactic radiosurgery within 90 days of their index surgery. **CONCLUSIONS:** Linking claims and public death records provided results in large populations that were similar to those in clinical trials and observational literature, both in terms of survival and treatment patterns.

PCN20

**RISK OF DEATH AT ONE YEAR IN PATIENTS WITH NON-SMALL CELL LUNG CANCER (NSCLC) TREATED WITH CISPLATIN REGIMENS: AN INDIRECT COMPARISON META-ANALYSIS BASED ON RENAL ELIGIBILITY CRITERIA**

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**OBJECTIVES:** The risk of nephrotoxicity with cisplatin may be lower when glomerular filtration rate (GFR) is used as eligibility criteria compared to serum creatinine (SCr), but the impact on survival remains unknown. The objective of this meta-analysis was to indirectly compare the relative risk (RR) of death at one year in trials using cisplatin for NSCLC when renal function was assessed using either SCr or GFR for eligibility criteria. **METHODS:** Randomized trials comparing cisplatin to non-cisplatin regimens from 1990-2010 were identified in PubMed. Included studies used SCr or GFR as inclusion criteria, reported incidence of WHO or NCI grade ≥3 nephrotoxicity, and reported survival rate. Review articles, observational and non-randomized studies, phase 1 trials, studies not reported in English or without a comparator group were excluded. The number of patients surviving at one year was calculated from one-year survival rates. RR of death for cisplatin versus non-cisplatin regimens was estimated using random effects methods with sub-group analyses performed on studies using SCr, GFR, or either SCr or GFR as eligibility criteria. **RESULTS:** The literature search identified 2,359 studies of which 17 met inclusion/exclusion criteria (N=4,177). Of these, 9 studies used SCr (N=2,685), 1 used GFR (N=111), and 7 used SCr or GFR (N=1,381) for screening. Overall, RR of death at one year with cisplatin versus non-cisplatin treatment was 1.05 (95%CI 0.96-1.15, p=0.28). In sub-group analyses, RR was 1.15 (95%CI 0.98-1.34, p=0.08) for SCr, 0.90 (95%CI 0.75-1.08, p=0.27) for GFR, and 1.00 (95%CI 0.92-1.09, p=0.95) for either SCr or GFR. RR of death when GFR was indirectly compared to SCr was 0.78 (95%CI 0.62-0.99, p=0.04). **CONCLUSIONS:** Using GFR as eligibility criteria for cisplatin treatment appeared to reduce the risk of death at one year compared to SCr. However, results should be interpreted cautiously as only one study using GFR was included.

PCN21

**IMPACT OF HORMONE RECEPTOR STATUS AND HER2 ON SURVIVAL OF TRIPLE NEGATIVE BREAST CANCER PATIENTS**

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**OBJECTIVES:** To determine the impact of hormone receptor status and HER2 on survival for patients with triple negative breast cancer. **METHODS:** Electronic medical records from a network of 9 hospitals were linked to female breast cancer patients who were diagnosed between 2007 and 2010 in Florida. Cox proportional hazards model was used to assess cause-specific survival. **RESULTS:** Two-year survival of the study population was 95.1%. Median follow-up time for those who died due to breast cancer was 569 days. Log-rank test indicated survival functions between blacks and non-blacks were significantly different over time ($p< 0.0001$). KM survival curves revealed that survival probability among black was lower than that of non-blacks. Hazard of breast cancer death among patients with triple negative and patients with unknown triple negative status were 4.34 and 2.35 times that of non-triple negative patients. Death rate among blacks was 1.6 times than non-blacks over time. Other factors associated with an increased hazard over time were being diagnosed in regional stage or having unknown diagnosis stage, having poorly or un-differentiated tumor, being Medicare user, being single, with larger tumor size, and with more positive nodes detected. Immediately after diagnosis distant stage and more comorbidity conditions were associated with an elevated risk, whereas more lymph nodes examined was associated with reduced risk of breast cancer death. Effects of distant stage, total comorbidity, and total lymph nodes examined gradually attenuated over time. **CONCLUSIONS:** This study highlights the importance of improvement of care for patients with triple negative biomarkers.

## CANCER – Cost Studies

PCN22

**DUAL-ACTING OSMOTIC AND STIMULANT LAXATIVE FOR BOWEL CLEANSING IN AN ELDERLY POPULATION: A US PAYER BUDGET IMPACT ANALYSIS**

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**OBJECTIVES:** Joint guidelines recommend colorectal cancer (CRC) screening every 10 years in average-risk adults beginning at age 50 years including colonoscopy (CSPY) where proper bowel preparation is critical for quality screening. The aim of our analysis was to quantify the budget impact on US payers of introducing a dual-acting osmotic and stimulant laxative for bowel cleansing, sodium picosulfate/magnesium citrate ( P/MC) in individuals 65 years and older. **METHODS:** A decision analytic model was developed to estimate the impact on direct medical costs of P/MC utilization in CRC screening by CSPY (2% and 12% in years one and three, respectively). Standard clinical practice was represented through a decision tree based on clinical guidelines and included utilization of currently prescribed bowel cleansing products (MoviPrep, HalfLytely, SuPrep, 4L PEG). Data from RCTs were used to quantify the adequacy of bowel cleansing. Prep costs were based on 2012 wholesale acquisition costs. Costs of complete, incomplete and repeat colonoscopies were obtained from Medicare claims analyses. **RESULTS:** For every 100,000 individuals 65 years of age and older who undergo colonoscopy, the use of P/MC demonstrated cost neutrality when used by 2% of subjects, yielding annual incremental savings of $86,555 ($213,016,329 before introduction vs. $212,929,775 after introduction). If P/MC use increases to 12% in year three, the annual estimated incremental savings per 100,000 cases increased to $333,846. Cost savings are mainly due to a reduction in repeat colonoscopies (-$439,904 year one and -$572,792 year three). One-way sensitivity analysis demonstrated the model to be most sensitive to P/MC drug cost and adequacy of cleansing when using generic 4L PEG. **CONCLUSIONS:** The introduction of P/MC into CRC screening practice in a 65 year and older population is cost neutral from the US payer perspective with moderate cost savings which becomes greater with increased utilization.

PCN23

**EGFR TEST-GUIDED ERLOTINIB VERSUS CHEMOTHERAPY FOR FIRST-LINE TREATMENT OF ADVANCED NON-SMALL CELL LUNG CANCER: A BUDGET IMPACT ANALYSIS**

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**OBJECTIVES:** A recent phase III clinical trial, EURTAC, demonstrated that first-line treatment with erlotinib significantly improved progression-free survival compared with standard chemotherapy in advanced non-small cell lung cancer (NSCLC) patients whose tumors harbored epidermal growth factor receptor (*EGFR*) mutations. We sought to estimate the budgetary impact of adding coverage for erlotinib in this patient population. **METHODS:** We developed a budget impact model from the U.S. health plan perspective to compare *EGFR* test guided treatment with erlotinib (erlotinib for *EGFR*-positive patients and standard chemotherapy for *EGFR*-negative patients), compared to treatment with the standard chemotherapy without testing. Standard chemotherapy included recommended chemotherapy regimens as defined by the National Comprehensive Care Network guidelines. The target population was estimated using data extracted from the SEER 17 registries. Treatment duration, dosage, and adverse event data were derived from clinical trial data and manufacturer prescribing information. Cost data were obtained from the Centers for Medicare and Medicaid Services payment rates, and drug costs were based on wholesale acquisition costs. Sensitivity analyses were conducted to assess uncertainty. **RESULTS:** Overall health plan expenditures increased by $0.031 per member per month (PMPM). This increase was largely attributable to increased drug costs for patients receiving erlotinib who experienced longer progression-free survival and treatment duration. *EGFR* test cost also contributed to the increased expenditures, whereas adverse event costs reduced the incremental expenditures. The most influential model parameters were drug cost and treatment duration, however the budget impact did not exceed $0.045 PMPM in the sensitivity analyses. **CONCLUSIONS:** *EGFR* testing and treatment with erlotinib in 1st line NSCLC likely results in a relatively small budget impact for U.S. health plans, while providing a personalized medicine approach to lung cancer treatment.

PCN24

**BUDGET IMPACT ANALYSIS OF DARBEPOETIN ALFA EVERY 3 WEEKS VERSUS EPOETIN ALFA EVERY WEEK FOR CANCER PATIENTS RECEIVING CHEMOTHERAPY FROM A US PAYER'S PERSPECTIVE**

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**OBJECTIVES:** To estimate the annual budget impact of drug treatment associated with treating cancer patients with anemia due to the effect of concomitant myelosuppressive chemotherapy (CIA) with erythropoiesis stimulating agents (ESAs), either darbepoetin alfa (DA) once every three weeks (Q3W) or epoetin alfa (EA) once every week (QW), for a large US health plan in 2010. **METHODS:** A retrospective database analysis of administrative claims data for US commercially-insured individuals from January 1, 2009 to December 31, 2010 was conducted to estimate prevalence of CIA among patients receiving chemotherapy treatment. Using this information, a patient database from a large US health plan was adjusted to estimate budget impact of ESA treatment on this patient population (1,755 patients each per DA and EA) in 2010. The analysis assumed: 1) a minimum of two additional months of chemotherapy and 2) that administration costs equal the sum of office visit and injection costs. The 2010 Centers for Medicare and Medicaid Services reimbursement rates used were: average sales price +12% of $3.06/mcg (DA) and $10.23/1,000 IU (EA), office-based